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Facilitating Cognitive-Emotional Congruence in Anxiety Disorders During Self-Determined Cognitive Change: An Integrative Model

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The treatment of the multiple dimensions of anxiety requires a multimodal therapy. To facilitate the congruence between cognition and emotion, a synthesis of cognitive restructuring, progressive self-relaxation training, and concentration skills training is presented as an integrative model applied to inpatient Vietnam combat veterans with PTSD (Post-Traumatic Stress Disorder) during the process of self-determined cognitive change. Using a cognitively oriented frame-work, the model provides procedures that identify important propositional beliefs, transform the personal meaning of these beliefs, pair beliefs/self-talk with a state of well-being to facilitate cognitive-emotional congruence, and operationalize beliefs into observable behavior. Emphasis is placed on the rationale, clinical integration, and application of the various components within a cognitively oriented approach.

A cognitive mediational approach that endeavors to help the individual change by modifying the internal dialogue alone may not change the emotional or behavioral experience of the individual. Cognitive-emotional dissonance occurs when the individual attempts to apply rational thinking yet still experiences old familiar feelings. Known more popularly as the discrepancy between the "head and the heart," the resistance to more adaptive ideas, to more functional attitudes may be the result of the person not knowing how to change more than the self-limiting thoughts:

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"I learned to tell myself I deserve to be forgiven. I believe I deserve to be forgiven. My Vietnam buddies say they would forgive me for my actions, but I don't *feel* forgiven."

This article presents an integrative approach to facilitate cognitive and emotional congruence by blending elements of cognitive restructuring, progressive self-relaxation, and concentration skills training in the treatment of anxiety. There is increasing interest in the development of integrated models combining elements of cognitively oriented approaches with relaxation procedures (Dendato & Diener, 1986; Corder, Whiteside, & Haizlip, 1986; Griffiths, 1985; Hillenberg, 1985; Tolman & Rose, 1985; Hazaleus, 1984; Meichenbaum, 1977), however, many of these models structure the treatment variables in a linear sequence. The program presented emphasized a *synthesis* rather than a *sequence* of the elements of cognitive restructuring, progressive self-relaxation, and concentration-skills training to expand upon the primary clinical tasks of a cognitively oriented approach. This synthesis sought to: a) increase the individual's capacity to shift and focus cognitive attention; b) increase the individual's capacity to produce a relaxation response; and c) pair a new, more adaptive cognition or proposition/self-talk with the self-induced state of relaxation in an attempt to facilitate cognitive and emotional congruence during the process of self-determined cognitive change. The program, *Choosing to Change*, was employed on five separate occasions as a treatment group on a 90-day specialized inpatient treatment unit designed to treat post-traumatic stress disorder (PTSD) in Vietnam combat veterans.[1] It was one of many ongoing treatment groups set in a therapeutic community that included didactic presentations and interactional therapies, and it served in an ancillary role to groups that dealt directly with the trauma of the veterans' military experience. The presentation of the program will, we hope, be of heuristic value and stimulate interest in controlled study.

There are an increasing number of cognitive theorists and others who are questioning the primary and unifying principle of cognitive mediational theories that proclaim that the principal determinant of emotion, behavior, and motivation is *entirely* the product of the internal dialogue of conscious thinking. Mahoney (1980) and Yesavage (1980) review the arguments for considering unconscious processes as contributing factors, concluding that they are probably more important than has been previously acknowledged by cognitive-behavioral theorists. Mahoney considers that nonverbal reasoning existed in humans long before the emergence of words; that hemispheric specialization suggests that the right hemisphere functions in a less verbal, less logical way than the left; and that there are nonverbal experiences that are stored in the memory in a form that is only partially accessible to linguistic searches. Yesavage examines the limits of cognitive conceptualization, noting that rationalization is only one of many ways that individuals make reasonable judgments. Yesavage traces other modes of decision making that have been described by Kant's *a priori* categories of understanding, Freud's primary

[1] The specialized treatment unit is now part of the National Center for Post-Traumatic Stress Disorder, Clinical Laboratory and Education Division.

process, Jung's archetypes, and contemporary research on split-brain function. Sherwin (1973) also reviews evidence of cognition outside of conscious awareness, suggesting that nonconscious cognition can influence autonomic nervous system arousal before conscious awareness. Zajonc (1980) argues that emotional processing occurs prior to and independent of cognitive processing. Although his article has generated much subsequent debate (Plutchik, 1985; Kleinginna & Kleinginna, 1985; Lazarus, 1984; Zajonc, 1984; Watts, 1983), Zajonc identifies six empirical response patterns that demonstrate the independency of affect. Erikson's (1950) developmental theory postulated that the stage of trust vs. mistrust (a frequent issue in PTSD and anxiety disorders) occurs between birth and one year, a period when the infant has yet to develop an internal language in the form of conscious self-statements. Consequently, as Mahoney suggests, mistrust may be experienced in adult clinical populations without a traceable cognitive etiology.

Increasing recognition is being given instead to the multiple dimensions of human response, suggesting that a multimodal response targeted for treatment requires a multimodal therapy. Bernstein and Nietzel (1981) describe anxiety as a complex response that involves cognition, physiological, and motor responses. The *self-report* of conscious cognition may indicate anxiety ("I feel nervous"); the *physiological response* may be indicated by galvanic skin response, blood pressure, heart rate, muscular tension, respiration rate, temperature; and *motor response* may involve stuttering, tremors, and pacing. More importantly, these three dimensions are not highly correlated (Lacey, 1967; Lang, 1968, 1971, 1977). This lack of correlation may be a possible explanation for the occurrence of cognitive and emotional incongruence as an individual who is anxious may show a strong response in only one dimension. For example, in a large crowd, a Vietnam combat veteran's sympathetic nervous system may send out signals to his adrenal glands, which in turn combine with hormones that effect the function of his organs to increase blood pressure and levels of cortisone, all the while denying any thought of discomfort to himself or others for fear of appearing inadequate or for fear of acknowledging his own sense of inadequacy.

In sum, this complex response of anxiety requires an integrative therapy combining components targeted to treat its dysfunctional symptoms of cognition, emotion, physiological and motor response. By integrating the techniques of progressive self-relaxation and concentration-skills training within a cognitive framework, an attempt can be made to treat these multiple dimensions of anxiety.

CHOOSING TO CHANGE: AN INTEGRATIVE MODEL

In presenting the program, a framework organized by the clinical tasks required of a cognitively-oriented approach will be utilized. Cormier and Cormier (1979) have delineated specific clinical tasks when employing a cognitive approach which I have slightly modified to integrate the additional components:

- A verbal set to prepare the person to accept the notion that self-talk can influence perception, expectation, and behavior and that with the development of the skills of concentration self-talk can be self-directed.
- Identification of client thoughts/self-talk in important situations.
- Identification of alternative propositional thoughts/self-talk and indications of behavioral change.
- Development of progressive self-relaxation skills and concentration skills as a means to shift from self-defeating thoughts to alternative propositional thoughts/self-talk and facilitate cognitive-emotional congruence.

Each of these tasks will be described in detail.

Verbal Set

Here the attempt was made to strengthen the veterans' belief that their thoughts or self-talk could influence their perceptions, emotion, behavior, and motivation. Reference would be made to the writings of poets, statesmen, and philosophers who sensed the power of thought and language to shape definition and provide meaning to social circumstance and personal experience. These references served to illustrate that for centuries, individuals have realized that to some extent "words are the physician of a mind diseased" (Aeschylus) and that the "mind is its own place, and itself can make a heaven of hell, a hell of heaven" (Milton). Examples of various clinical syndromes would be given to illustrate how thinking and expectations shape perception. For example, the anxious person was described as a person who continually anticipates unavoidable danger; the obsessive person as one who focuses constantly on risk; the paranoid person as one who thinks others are abusing him; and the depressed person as one who believes that he has lost something essential for happiness. Attention would be given to the existential viewpoint that the freedom to choose how to think did not necessarily ensure that the choices would be healthy ones, and that if individuals are to choose wisely, it is necessary for them to be aware of possibilities. Emphasis was added that thoughts are part of the process of thinking (as opposed to an unalterable reflection of reality), a process amenable to conscious change through the structured and disciplined effort of learning the skills of self-relaxation and concentration development. This first step of verbal preparation was crucial, for without its accomplishment the veteran remained seeing himself as a victim of circumstances, of feeling states, and continued to have an external locus of control.

Identification of Client Thoughts/Self-Talk in Important Situations

Once the veterans were able to accept the rationale that self-talk could greatly influence their perceptions and expectations (members who couldn't accept this primary principle were given the option to drop the group), the next task was to

identify a belief that influenced the veteran in situations that were perceived as important. As Mahoney (1980) has stated, the accurate identification of a person's fundamental beliefs is an awesome task and is vulnerable to the limitations of language and the life experience of the client and the clinician. Whatever it is, the clients' cognitive reality must be welcomed through our warmth, our genuineness, and our empathy. Accepting the viewpoint noted in Yesavage's article and the proposal by Mahoney (1980) that it might not be necessary to reject a belief in order to develop a new, more functional belief, an assignment was developed that included the option of either a) selecting an aspiration or archetype to develop, or b) identifying a self-defeating belief to change. The following assignment was given:

> Choose one of the topics/questions below to write about. Before writing, discuss the question or topic with your peers, your doctor, me, or other staff to understand how others view your thoughts about the matter.
>
> 1. What quality or characteristic do you think you need to develop at this time in your life? What has made it difficult for you to experience this quality or characteristic? Describe an actual situation that would be an opportunity to express this quality or characteristic you wish to develop. What could you say to yourself to remind you of this quality or characteristic and its importance to you?
> 2. Identify a particular fear that you have (for example: fear of loneliness, assertiveness, rejection, losing control). Describe a situation when this occurs and how you disguise this fear. What other emotions do you experience when you feel this way? What do you say to yourself about yourself for having this fear?
> 3. Describe an archetype that is meaningful to you. For example: the hero, the seeker, the mysterious stranger, the father, the lover, the fool, etc. What emotions do you experience when you think about this archetype? Describe an actual situation where this archetype could find its further expression in your life. What could you say to yourself to remind you of this archetype and its meaning to you?

Identification of Alternative Propositional Thoughts/Self-Talk and Indications of Behavioral Change

When reviewing the assignment the clinician must use his/her clinical experience to evaluate the material, using interpretation judiciously to identify distorted styles of thinking (Burns, 1980), unrealistic expectations, and developmental arrests. During the program, individual sessions were held and a collaborative effort was made to identify a belief that the veteran valued, a belief that was not operationalized to the extent that it influenced behavior. Once a belief was identified, the next task was to summarize its essential meaning into a *propositional phrase*. Pylshyn (1973)

argues that knowledge is stored in abstract structures that contain information about meaning, relations, concepts, and properties that are in a propositional format. These propositions are not semantic in nature but a network of meanings represented by words. The development of a phrase represents a summation of the issue and a reflection of the cognitive structure, and proposes new meaning through the working of the assignment. This propositional phrase is intended to influence the informational structures at an abstract level so that its meaning is perceived, transformed, and understood at levels that exceed literal or concrete interpretation. This was another critical moment in the program as the individual initially looked to the therapist to validate the new belief represented by the phrase, as the older, more familiar emotional, physiological, motor, and cognitive structure was to some extent dissonant to the new information. Encouragement was given in the form of relating to the individual as if the belief was fully realized. The acceptance that the belief existed in the individual, combined with the acknowledgment that there would be a period of emotional and cognitive dissonance, prepared the person for the practice and learning of the propositional phrase. Further effort was made to identify a specific behavior that would be an indication of change. It was important that behavioral change be along the dimensions of frequency, duration, or intensity so that success could be experienced without having to achieve absolute change. The technique for learning the new belief or propositional phrase and examples of phrases will be presented in the self-enhancing affirmation technique section.

Development of Progressive Self-Relaxation Skills, Concentration Skills, and Alternative Propositional Thoughts/Self-Talk

As an alternative to the approaches commonly referred to as thought stopping (Cormier & Cormier, 1979), three methods—progressive self-relaxation, conscious deep-breathing, and a self-enhancing affirmation technique — were used to teach the individual how to:

1. Shift from habitual self-defeating cognitions to the proposition/cognition of choice.
2. Learn and/or increase the individual's realization of the new proposition.
3. Experience a positive emotion in association with the new proposition/cognition to facilitate cognitive-emotional congruence.
4. Actualize the new proposition/cognition.

It is with the teaching of these skills that the program begins to utilize and synthesize techniques that differ from the more conventional cognitive therapies. To begin the task of developing the skill to shift and focus cognitive attention, an effort was made to increase the individual's capacity for concentration. The approach used began with the development of *concrete concentration*. This is defined as the ability to focus conscious thought upon an object. The two methods used to develop

this skill were a subset of verbal instructions incorporated into the progressive self-relaxation procedure and a conscious deep-breathing technique (each to be described in detail). This was followed with a method to develop and exercise *abstract concentration,* defined as the ability to focus conscious thought on an idea. The development of this form of concentration applied itself nicely to the task of learning and increasing the realization of the meaning of the propositional phrase. It further served to develop the ability to shift cognitive attention away from any self-defeating thoughts back to the self-enhancing propositional phrase (very often a combat veteran complains of intrusive thoughts that cannot be ignored, and this exercise provides him with a skill to turn his attention away from unpleasant thoughts).

By synthesizing the exercises of concentration with the methods of self-relaxation, the new cognition could be learned and experienced in a state of relaxation. The educational literature has widely acknowledged the effect of relaxed concentration in facilitating learning and has long demonstrated that nervousness, fear, and tension inhibit the recall of even learned cognitions. This pairing of relaxation and cognition provides an experience of cognitive-emotional congruence and sets the conditions to allow the individual to experience the spontaneous state of *becoming the idea.* This experience serves as a step from the intellectualization (literal understanding) of the idea to an inner experience (abstract understanding) of the idea. For example, the client moves from telling himself that "I'm in control" to *experiencing* himself as in control. It seems that this state cannot be achieved by rationalization alone. As Maultsby (1977) suggests, to benefit from rational thinking, the individual must not only think the ideas... he has to communicate them to himself. The final form of concentration is *actualization,* when the idea is expressed through behavior. As mentioned, assistance is given to help clarify specific situations that would be an opportunity to express the belief. Individual sessions were provided to monitor progress and provide support.

Each of the three methods are capable of producing a relaxation response in and of themselves. A synthesis occurs as each method serves the dual purpose of concurrently increasing the skills of concentration. The self-enhancing affirmation technique has the tertiary purpose of facilitating the learning and understanding of the propositional phrase or new cognition.

Progressive self-relaxation technique: This procedure was adapted from Bernstein and Borkovec (1973). It requires a verbal set, the creation of a comfortable environment, and therapist modeling of the exercises and instructions. A pre- and post-test measure of the levels of tension/relaxation was utilized to assess the progress of the individuals and the group as a whole. A subset of instructions included during the exercises emphasized that members focus their entire attention on the experience of the specific muscle group. This emphasis served to develop concrete concentration, that is, focusing attention on an object. Gradually, as the test scores indicated deeper levels of relaxation, members were given more responsibility for conducting their own routine. Eventually group members were producing their own relaxation response.

Conscious deep-breathing technique: This technique was used because it deepened the relaxation response, aided concrete concentration development, and served as a transition exercise by preparing the individual for the *self-enhancing affirmation technique* which would also utilize a variation of conscious deep-breathing. A leader-facilitated routine demonstrated the following four-step technique (each step was repeated five times before proceeding:

Step I — Deep inhalation through the nose, 2-second hold, full exhalation through the nose.

Step II — Deep inhalation through the nose, 2-second hold, full exhalation through the mouth.

Step III — Deep inhalation through the mouth, 2-second hold, full exhalation through the nose.

Step IV — Deep inhalation through the mouth, 2-second hold, full exhalation through the mouth.

Members were instructed to focus their attention on the source of the inhalation/exhalation (concrete concentration), to breathe with a sense of control, and to avoid sudden or rapid inhalations/exhalations. A gradual transfer of the leader's role to the individuals in the group was achieved in a fashion similar to the transfer of the progressive self-relaxation technique.

Self-enhancing affirmation technique: This technique is similar to the relaxation-response technique described by Benson (1976), with one important exception. Instead of choosing one word, one substitutes the propositional phrases/self-talk that was developed from the assignment. Research has shown that the relaxation response is not dependent upon the content of the phrase or a mantra (Drennen & Chermol, 1978). The group members were taught to sit comfortably. After completion of the progressive self-relaxation exercise and the conscious deep-breathing technique, members, while in a state of deep relaxation, began to concentrate on the propositional phrase/self-talk (referred to in the group as the self-enhancing affirmation phrase). Each phrase was divided into two sections. Part of the phrase would be said to oneself on a deep inhalation, followed by a 2-second holding of the breath, while the other half of the phrase was said internally on a full exhalation. Members experimented with the internal meter or pacing of the phrase to find a comfortable rhythm. The members were instructed to concentrate on the phrase during the inhalations and exhalations and when aware of attending to some other thoughts to return their attention to the phrase without any judgment or self-criticism for having thought about something else. This was the beginning of abstract concentration, the fixing of thought upon an idea. This procedure was done initially for 5 minutes with the leader facilitating the routine by providing verbal cues to bring the attention back to the phrase without judgment. The refocusing of attention on the phrase exercised abstract concentration and provided the individuals a method of shifting attention

to the proposition/cognition of choice. Eventually the time was increased to 10 minutes. The following are examples of propositional phrases or self-enhancing affirmations developed from the assignment and used by the veterans:

Deep Inhalation	2-Second Hold	Full Exhalation
1. Forgiving myself	.....	Allows me to forgive others
2. Perfection	.....	Forgives
3. Friendship begins	.....	By being a friend
4. I can control my anger	.....	I can choose how to express it
5. Good intention	.....	Creates self-confidence
6. Courage begins	.....	With loving the self
7. The purpose of life	.....	Is a life fully lived

As mentioned, these phrases served to represent a network of meanings specific to each veteran that exceed their literal meaning. This routine was repeated four consecutive days a week, for six weeks, at the same time, in the same place, with a consistent replication of environmental features. The purpose of this consistency and repetition was to condition the body and the mind to become habituated to the experience of relaxed concentration so that eventually an expectation of the experience served to deepen and quicken the exercises. The experience of *becoming the idea* seemed to occur spontaneously only after the individual had some proficiency at producing a deep relaxation response.

Case Example

A 38-year-old combat veteran was admitted to the inpatient program with an Axis I: Post-traumatic stress disorder; cannabis abuse; alcohol abuse. Axis II: none. This veteran returned from Vietnam very bitter and angry about his Vietnam experience, where he spent much of his tour in the jungle under inordinate stress. His anger escalated when his family did not understand his behavior. His anger flared into violence on many occasions. The veteran was quiet and serious while in the hospital, however, he was able to work on his anger in various treatment groups. In response to the assignment of identifying an aspiration or self-defeating belief to change, he wrote:

> Identification of fear: Losing control.
> Situation: Drinking with my father-in-law and his brother. Get into a disagreement which turns into an argument. Start getting angry and using foul language. Expect them to agree with me. I disguise the fear by becoming loud, using foul language and threats. I get scared of getting into trouble and hurting someone. What do I say to myself about myself? Why do I get involved in these petty arguments like this that lead to my losing control?

In discussing his response, the first task was to address the unrealistic expectation that he could hope to remain in control while drinking and to explore the "drinking relationship" with his father-in-law. In addition, we explored what he said to himself about himself when his father-in-law disagreed with him and what he could say to himself and his father-in-law to remind him of his own wish to remain in control. The result of our meetings and his discussions with others was his stated agreement that he could not drink with his father-in-law, that he could take responsibility for telling his father-in-law that "we shouldn't drink together . . . it always leads to my getting worked up, pissed off, and loud . . . I don't want that." The summation of his work on the assignment was the phrase "I can control my anger, I can choose how to express it." The indication of behavioral change revolved around situations where he experienced disagreement and a lack of understanding from someone on the unit (since his home state and father-in law were thousands of miles away). When encountering confrontation and misunderstanding, he wanted to experience being in control without having to either yell profanities or become assaultive, thus he was attempting to decrease the intensity of his anger, and reduce the number of incidents that involved his becoming either physically or verbally assaultive.

While the veteran was working on the assignment, he was taught, along with the other members of the group, the exercises for self-progressive relaxation and concentration development. When his measures of relaxation consistently indicated "very relaxed" and the phrase was created, the self-enhancing affirmation technique was taught to the veteran along with the other group members. The procedures were continued for three more weeks, with four sessions a week. As the veteran expressed proficiency with the techniques, he was instructed to have eight additional sessions for two weeks with the other members of the group without the therapist. This was followed with the instructions to begin doing the procedure by himself on his own schedule, however, with the injunction that the procedure be done at the same time each day, with a replication of the environment. It was emphasized that the routines required continued daily practice after the program, much like a martial art, in order to gain maximum benefit from the proposition and skills training.

A follow-up interview with the veteran one month after the group and shortly before his discharge suggested that he was receiving some benefit from the *Choosing to Change* program. He reported that the "breathing relaxes me and gives me the experience of being in control. The phrase keeps reminding me that I can control myself." He said that he discovered that he could be in control while being relaxed and that he did not have to resort to physical domination or assault to give him the feeling of being in control. He described an incident that occurred on the unit, where another veteran "gave me a smartass remark which would have pissed most people off. He said something like *'Who are you? Who you do you think you are?'* I looked at him and was going to say something but I thought about my phrase and I immediately dismissed any negative reaction. I simply told him I would appreciate it if he would mind his own business. That worked out fine and I sat at another table and enjoyed my dinner." He further reported being more aware of

tension just before sleeping and being able to release it. He concluded the interview by stating unsolicitously "I am more relaxed than I ever hoped to be."

CONCLUSION

I have presented a rationale and an integrated program for the treatment of anxiety. Because the program, *Choosing to Change*, was not conducted as a research project, the many confounding variables capable of influencing change in the population were not controlled. Long-term follow-up was not planned for but certainly is acknowledged as a requisite of confirmation of any long-term effects. Hopefully, the rationale and the description of this integrated approach will stimulate interest in controlled studies that evaluate the synthesis of cognitive restructuring, self-relaxation, and concentration-skills training. Regardless of the form of psychotherapy and whether or not it directly emphasizes the role of self-talk or cognition, clients still have to struggle with the conflicts between their "heads and their hearts." It is my hope that *Choosing to Change* be viewed as a tool for various clinical approaches to help clients realize their aspirations for change by providing a systematic approach to further learning the insights gained from therapy, a method of gaining control over chronic dysfunctional and self-limiting patterns of thinking, and a method to bring cognition and emotion into congruence.

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